Mill Brook Watershed (MBW) Study Updated 6/13,2016

Also use appendix data where relevant.

1. Why are we here? Selectmen charge for the Committee: Purpose of the MBW study and management plan.
2. BioDiversity Works, Volunteers, Sea Run Brook Trout Coalition etc.
3. Demonstrate water flow and watersheds on the island—every drop of water wants to find the ocean.
4. Define the Tisbury Great Pond and Mill Brook watersheds.
5. Tisbury Great Pond (TGP) is the resource most impacted by activities within the TGP watershed (TGPW) and Mill Brook watershed. Explain the broad values, human uses and importance of the TGP – ecological, recreational, economic, scenic etc. Should we reference the Mass. Estuaries Study for TGP?
6. Explain the features and attributes of the MBW:

   Area – 3400-acres and acreage use: 67% wooded terrain; % developed, % mill brook system and area; % impoundments area etc.

   Water Inputs: precipitation, subsurface and surface flows, human inputs—road runoff, nutrients etc. Include ground water recharge rate -- % evaporation; % absorbtion; % reaching the ground water table.

   Mill Brook system within the MBW: 4.0 miles—define inputs; define volume of water flow, primary flow into Town Cove and TGP; impoundments.

7. Why is this important? What are the values, uses and interests of the MBW? Ecological, human, wildlife habitat—vertebrate and invertebrate, domestic water, recreation, value to TGP, road transportation water flow management (stormwater road runoff and flood control), agriculture, nature's water filter, fire ponds (have fire ponds outlived their usefulness? There is technology today that is more effective – fire water tanks and hydrants) etc. Reference the values and protected interests of salt ponds, fresh water ponds, land under salt ponds and fresh water ponds, perennial streams, buffer zones etc. as outlined in the Town's Wetland Protection Bylaw and Regulations. This defines the ecological importance of the MBW features.
8. This is a snap-shot view or annual report on the watershed. Describe the physical characteristics of the MBW and MB system? Review study methods and data locations. Review types of data obtained and why. Review data by location. Highlight patterns and implications—ESS data, Sea Run Brook Trout temp. data, Luanne's data, Div. of Fisheries data.
9. What are the potential causes of the data patterns (both positive and negative) and implications of these patterns—natural evolution and man-made pressures and changes?
10. What are the threats to the MBW and estimated consequences of each activity or natural change--singularly and cumulatively. For ex. Each individual threat may seem inconsequential but, cumulatively some may pose a more detrimental effect that cannot be overcome by the

natural healing properties within the MBW and surrounding wetlands and wetland buffer zones thus, requiring watershed management actions.

11. Which (if any) of the threats to the health or well-being of the MBW should be addressed, when and why? What is the potential impact of no action? How might the threats be eliminated, controlled or managed to mitigate their impacts? How would we measure success of any corrective measures taken?
12. Recommended short term actions and in-actions and why for each. What are the consequences of doing nothing? What are the benefits of the actions such as increased shade, better culverts, increased understory—particularly near farming activities within the MBW etc.?
13. Discuss the values of the Mill Pond to the watershed's performance and to residents.
14. What are the characteristics of the Mill Pond (from the data) and is its existence being threatened and if so how and what is the cause? Compare its data to the other empoundment data. It will never have the appearance of Parsonage Pond because the Mill Pond is fed directly by the Mill Brook; – rather than an artificial diversion that is overgrown. The water turns over 2-4 times per day (Kent's water flow data). What are our recommendations and why?
15. Does the Mill Pond need to be dredged? What are the projected impacts to the overall watershed and immediate up and down stream of dredging and not dredging. What is the cost/benefit assessment? Is this investment in the watershed more important than other Town capital needs?
16. Should the dam be removed? What are the projected impacts to the overall watershed and immediate up and down stream of removal.
17. What are the consequences of doing nothing to the Mill Pond?
18. Now what? Summarize recommended short term and long term actions—such as repeat watershed study, at what intervals and why. Identify source of funding (CPA Open Space Preservation?) potential future conditions or threats to watch for as the Town evolves over time. Continued oversight and monitoring Etc.